ADAMODE - Adabas Interface Mode

This Natural profile parameter is for mainframes only.

It controls the number of Adabas user queue elements (UQE) per Natural session.

Possible settings	0	Start Natural with one Adabas session without using the Adabas X48 communication (Natural in Natural Version 2.2 mode). Only one UQE is initialized and the ID of the UQE is built by the ADALN*x* module. All database calls - either sent by the nucleus, an application program or a 3GL program - are considered as the same Adabas user. Running under SYSPLEX is not possible. **Note:** If a non-zero value is specified for ADAMODE, but an Adabas subcomponent is unable to perform an Adabas X48 communication, an error message is issued and ADAMODE is set to 0.
	1	Start Natural with one user and Adabas X48 communication. Only one UQE is initialized, all nucleus and application database calls are submitted for the same UQE, however, calls sent by 3GL programs are excluded. Running under SYSPLEX is possible.
	2	Start Natural with two Adabas sessions, both using the Adabas X48 communication (Natural Version 2.3 mode). Two UQEs are generated at Natural session startup, and nucleus and application calls are running separate from each other. Database calls sent by 3GL programs are excluded from Natural transactions. Running under SYSPLEX is possible.
	3	Start Natural with one UQE using Adabas X48 communication for nucleus calls and one UQE without Adabas X48 communication for application calls. Nucleus and application calls are running separate from each other. Database calls sent by 3GL programs are included into Natural application transactions. Running under SYSPLEX is not possible.
Default setting	2	
Dynamic specification	YES	
Specification within session	NO	

Background Information:

With **Natural Version 2.2**, every Natural session is related to one Adabas user queue element (UQE). All calls to Adabas - sent by either the nucleus (e.g. to load Natural objects for execution) or any user application - appear to Adabas as the same user. The user identification in the UQE is automatically built by the ADALNx module and - depending on the environment (CICS, BS2000/OSD, TSO, etc.) - contains the task number, the terminal ID or any other unique item. Although the uniqueness of nucleus/application works fine in most cases, problems may arise under the following conditions:

When the nucleus and an application are starting update transactions (UDATE, STORE, DELETE) at the same time, an ET/BT command sent either by the nucleus or the application will confirm or roll back all transactions, no matter to whom they originally belong.

When a timeout situation (NAT3009) occurs, Natural has to inform the session user, but the logical user (nucleus/application) for whom the timeout was sent is not known.

With **Natural Version 2.3 and above**, a new logic to communicate (X48) with Adabas was introduced. This enables you to set up different users (UQEs) on Adabas for one Natural session. This feature separates Natural nucleus calls from application calls, and all transactions of the nucleus and the applications are running in their own logical environment. A timeout situation (NAT3009) received for nucleus calls is automatically handled by Natural and does not lead to an error message displayed to the user.
To allow Natural to run in a Sysplex environment, the mechanism previously used to build a UQE cannot be used any longer, because task number, terminal ID or whatever used by ADALNx to build a UQE ceases to be unique, since these items may change in a SYSPLEX environment on every terminal I/O statement. The X48 communication with Adabas is a prerequisite for Natural to run in a SYSPLEX environment.

This has the minor drawback that every Natural session is related to two different UQEs on Adabas; this means, the number of Adabas UQEs is doubled compared with Natural Version 2.2. This may cause problems if the number of UQEs is limited (refer to the Adabas parameter NU).

